



Ain Shams University  
Faculty of Science  
Biochemistry Department

# **Association between Adiponectin and Diabetic Retinopathy and Nephropathy**

**A Thesis**

*Submitted for the Degree of Master of Science as a Partial  
Fulfillment for Requirements of the Master of Science*

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***Declaration:***

I declare that this thesis has been composed and the work recorded here has been done by me.

It has not been submitted for any other degree at this or any other university.

***Shaimaa Mohamed***



## **DEDICATION**

**In the name of Allah most gracious most merciful, Praise be to God, the Cherisher and Sustainer of the worlds.**

I dedicate this thesis to my family and many friends.

A special feeling of gratitude to my loving mother, thanks for your continuous endless love, support and care. Thanks because you never stopped believing in me.

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***Shaimaa Mohamed***





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**List of Abbreviations**

<b>%</b> .....	Percent
<b>°c</b> .....	Degree Celsius
<b>3T3-L1</b> .....	Cell Line derived from mouse
<b>4-AAP</b> .....	4-aminoantipyrine
<b>4-AP</b> .....	4-aminophenazone
<b>A</b> .....	Absorbance
<b>ACE inhibitor</b> .....	Angiotensin-converting enzyme inhibitor
<b>ACE</b> .....	Angiotensin-converting enzyme
<b>ACR</b> .....	Albumin/creatinine ratio
<b>ACRP30</b> .....	Adipocyte complement-related protein
<b>ADA</b> .....	American diabetes associations
<b>Adipo R1</b> .....	Adiponectin receptor 1
<b>Adipo R2</b> .....	Adiponectin receptor 2
<b>AdipQ</b> .....	Adiponectin
<b>ADP</b> .....	Adenosine-5-diphosphate
<b>AGEs</b> .....	Advanced glycation end products
<b>AMPK</b> .....	5-adenosine monophosphate-activated protein kinase
<b>Ang I</b> .....	Angiotensin I
<b>Ang II</b> .....	Angiotensin II
<b>ApN</b> .....	Adiponectin
<b>ApoB</b> .....	Apolipoprotein B
<b>AR Blockers</b> .....	Angiotensin receptors blockers
<b>AR</b> .....	Aldose reductase
<b>AT-1</b> .....	Angiotensin type 1
<b>AT-2</b> .....	Angiotensin type 2